

What is claimed is:

1. A drive apparatus for a brushless motor, the brushless motor including a rotor having opposite magnetic poles arranged on a periphery of the rotor, and a stator facing the rotor and having at least three interconnected coils at equal angular intervals, the drive apparatus comprising:

memory means for storing drive data which represent drive currents to be supplied to the respective coils at each of predetermined angular positions of the rotor;

control means for reading those drive data which best match a target angular position of the rotor, from the memory means, and for generating drive signals based on the read drive data; and

a drive circuit for supplying the drive currents to the respective coils, based on the generated drive signals.

2. The drive apparatus according to claim 1, wherein the stator includes three coils, the drive apparatus further comprises a detector for detecting a current angular position of the rotor, and when a difference between the current angular position of the rotor and the target angular position is greater than a predetermined value, the control means does not read the drive data from the memory means, and instead selects two of the three coils based on the angular position difference and supplies signals to the drive circuit so as to supply appropriate currents to the selected two coils, until the angular position difference is not greater than the predetermined value.

3. The drive apparatus according to claim 2, wherein the predetermined value is 60 degrees.

4. The drive apparatus according to claim 1, wherein the brushless motor controls movement of an electronic throttle valve of an engine.

5. The drive apparatus according to claim 4, wherein the target angular position of the rotor is determined by a position of an accelerator pedal.

6. The drive apparatus according to claim 1, wherein the drive circuit includes a plurality of field-effect transistors.

7. The drive apparatus according to claim 2, wherein the detector includes at least one Hall element.

8. The drive apparatus according to claim 1, wherein the at least three interconnected coils are $3 \times n$ coils (n is a natural number).

9. A method for driving a brushless motor, the brushless motor including a rotor having opposite magnetic poles arranged on a periphery of the rotor, and a stator facing the rotor and having at least three interconnected coils at equal angular intervals, the method comprising:

storing, in a memory, drive data which represent drive currents to be supplied to the respective coils at each of predetermined angular positions of the rotor;

reading those drive data which best match a target angular position of the rotor, from the memory;

generating drive signals based on the read drive data;
and

supplying the drive currents to the respective coils based on the generated drive signals, respectively.

10. The method according to claim 9, wherein the stator includes three coils, the method further comprises detecting a current angular position of the rotor, and when a difference between the current angular position of the rotor and the target angular position is greater than a predetermined value, the method further comprises selecting two of the three coils based on the angular position difference and supplying appropriate currents to the selected two coils, until the angular position difference is not greater than the predetermined value, prior to reading the drive data from the memory.

11. The method according to claim 10, wherein the predetermined value is 60 degrees.

12. The method according to claim 9, wherein the brushless motor controls movement of an electronic throttle valve of an engine.

13. The method according to claim 12, wherein the target angular position of the rotor is determined by a position of an accelerator pedal.

14. The method according to claim 9, wherein the at least three interconnected coils are $3 \times n$ coils (n is a natural number).

15. An apparatus for driving a brushless motor, the brushless motor including a rotor having opposite magnetic poles arranged on a periphery of the rotor, and a stator facing the rotor and having three interconnected coils at equal angular

intervals, the apparatus comprising:

a controller for generating drive signals corresponding to a target angular position of the rotor, when a difference between the target angular position of the rotor and a current angular position of the rotor is smaller than a predetermined value; and

a drive circuit for supplying drive currents to the respective coils, based on the generated drive signals.

16. The apparatus according to claim 15, wherein if a difference between the current angular position of the rotor and the target angular position is greater than the predetermined value, the controller does not generate the drive signals, but selects two of the three coils based on the angular position difference and supplies signals to the drive circuit so as to supply appropriate currents to the selected two coils, until the angular position difference is not greater than the predetermined value.

17. The apparatus according to claim 16, wherein the predetermined value is 60 degrees.

18. The apparatus according to claim 15, wherein the brushless motor controls movement of an electronic throttle valve of an engine.

19. The apparatus according to claim 18, wherein the target angular position of the rotor is determined by a position of an accelerator pedal.

20. The apparatus according to claim 15, wherein the drive circuit includes a plurality of field-effect transistors.